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Amendments to the Claims

This listing of claims will replace all prior versions and listings of the claims in the application:

Listing of the Claims:

1.   (currently amended) A reticle for use in a photolithographic projection system, the reticle comprising a pattern of alignment attributes with known deviations ~~from~~ in the pattern encoded onto the reticle wherein the known deviations are imaged in predetermined locations on an exposed recording media and appear in a predetermined order when the projection system is operated in accordance with a properly ordered job deck, the deviations include placement errors in the pattern of alignment attributes, wherein the placement errors include a removed portion of an attribute, located at the same position of the pattern of alignment attributes, inside each field point array.

2.   (cancelled).

3.   (cancelled).

4.   (cancelled).

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5.   (currently amended) A reticle as defined in Claim [4] 1, wherein the removed portion of the pattern is asymmetric with respect to rotation of the pattern.

6.   (original) A reticle as defined in Claim 1, wherein the deviations include removal of two adjacent portions of an attribute that are orthogonal to each other.

7.   (original) A reticle as defined in Claim 6, wherein the two adjacent portions of the attribute form an L shape.

8.   (original) A reticle as defined in Claim 1, wherein the deviations include x-shift offsets in the pattern.

9.   (original) A reticle as defied in Claim 1, wherein the deviations include y-shift offsets in the pattern.

10.   (currently amended) A reticle as defined in Claim 1, wherein the line widths of the attributes are varied as a function of their location in the pattern.

11.   (original) A reticle as defined in Claim 1, wherein the projection system is a photolithographic stepper.

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12.   (original) A reticle as defined in Claim 1, wherein the projection system is a photolithographic scanner.

13.   (original) A reticle as defined in Claim 1, wherein the projection system is an electron beam imaging system.

14.   (original) A reticle as defined in Claim 1, wherein the projection system is a direct write tool.

15.   (currently amended) A reticle as defined in Claim 1, wherein the projection ~~tool~~ system is an extreme ultra-violet photolithographic tool.

16.   (currently amended) A reticle as defined in Claim 1, wherein the projection ~~tool~~ system is an x-ray imaging system.

17.   (currently amended) A reticle as defined in Claim 1, wherein the projection ~~tool~~ system is a scapula tool.

18.   (withdrawn) A method for the proper identification of photolithographic overlay data, the method comprising:

    providing a reticle having a plurality of alignment attributes that are encoded into

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a pattern that includes known deviations;

imaging the reticle alignment attribute pattern onto a recording media;

developing the image of the alignment attribute pattern on the recording media;

measuring the alignment attribute pattern on the recording media with a

programmed overlay tool; and

determining if the overlay tool measured the alignment attribute pattern in a

correct order by identifying the recording media locations of the known deviations within

the measured pattern and comparing these locations to the encoded pattern.

19.   (withdrawn) A method as defined in Claim 18, wherein the deviations

include placement errors within the pattern.

20.   (withdrawn) A method as defined in Claim 18, wherein the deviations

include removing a portion of an attribute at the same position of the pattern in each

field point array.

21.   (withdrawn) A method as defined in Claim 18, wherein the deviations

include removal of two adjacent portions of an attribute that are orthogonal to each

other.

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22.   (withdrawn) A method as defined in Claim 18, wherein the deviations include x-shift offsets.

23.   (withdrawn) A method as defined in Claim 18, wherein the deviations include y-shift offsets.

24.   (withdrawn) A method as defined in Claim 18, wherein line widths of the alignment attributes are varied as a function of their location in the pattern.

25.   (withdrawn) A method as defined in Claim 18, wherein the recording media is a positive resist coated substrate.

26.   (withdrawn) A method as defined in Claim 18, wherein the recording media is a negative resist coated substrate.

27.   (withdrawn) A method as defined in Claim 18, wherein the recording media is an electronic CCD.

28.   (withdrawn) A method as defined in Claim 18, wherein the recording media is a diode array.

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29.   (withdrawn) A method as defined in Claim 18, wherein the recording media is a liquid crystal.

30.   (withdrawn) A method as defined in Claim 18, wherein the recording media is an optically sensitive recording device.

31.   (withdrawn) A method of determining if a machine used to perform overlay measurements is programmed correctly, the method comprising:

providing a reticle with a plurality of alignment attributes that are encoded into a pattern that includes known deviations;

imaging of the reticle onto a recording media;

developing the image of the reticle pattern on the recording media;

measuring the alignment attribute pattern with a programmed overlay tool;

determining if the overlay tool measured the alignment attribute pattern in a correct order by identifying the locations of the deviations within the measured pattern and comparing these locations to a predetermined pattern;

altering a job deck set of instructions so that the locations of the deviations within the measured pattern match the locations in a predetermined pattern.

32.   (withdrawn) A method for the proper identification of CD data, the method comprising:

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providing a reticle with a plurality of alignment attributes that are encoded into a pattern that includes known deviations;

imaging of the reticle onto a recording media;

developing the image of the reticle pattern on the recording media;

programming a CD metrology tool to measure the alignment attribute pattern; and

determining if the overlay tool measured the alignment attribute pattern in a correct order by identifying the locations of the known deviations within the measured pattern and comparing these locations to the encoded pattern.

33.   (withdrawn) A method as defined in Claim 32, wherein the CD metrology tool is a CD-SEM.

34.   (withdrawn) A method of determining if a machine used to perform CD measurements is programmed correctly, the method comprising:

providing a reticle with a plurality of alignment attributes that are encoded into a pattern that includes known deviations;

imaging of the reticle onto a recording media;

developing the image of the reticle pattern on the recording media;

measuring the alignment attribute pattern with a programmed CD metrology overlay tool;

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determining if the overlay tool measured the alignment attribute pattern in a

correct order by identifying the locations of the deviations within the measured pattern

and comparing these locations to the encoded reticle pattern;

altering a job deck set of instructions so that the locations of the deviations within

the measured pattern match the locations in the encoded pattern.

35.   (new) A reticle for use in a photolithographic projection system, the reticle

comprising a pattern of alignment attributes with known deviations in the pattern

encoded onto the reticle, wherein the known deviations are imaged in predetermined

locations on an exposed recording media and appear in a predetermined order when

the projection system is operated in accordance with a properly ordered job deck and

the deviations include placement errors in the pattern of alignment attributes, wherein

the placement errors include a removed portion of an attribute located at the same

position of the pattern of alignment attributes inside each field point array and the

removed portion of the pattern is asymmetric with respect to rotation of the pattern,

wherein the removed portion includes removal of two adjacent portions of an attribute

that are orthogonal to each other such that the two adjacent portions of the attribute

form an L shape, wherein the deviations include x-shift offsets and y-shift offset in the

pattern, and wherein line widths of the attributes are varied as a function of their

location in the pattern.

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36.   (new) A reticle as defined in Claim 35, wherein the projection system is a photolithographic stepper.

37.   (new) A reticle as defined in Claim 35, wherein the projection system is a photolithographic scanner.

38.   (new) A reticle as defined in Claim 35, wherein the projection system is an electron beam imaging system.

39.   (new) A reticle as defined in Claim 35, wherein the projection system is a direct write tool.

40.   (new) A reticle as defined in Claim 35, wherein the projection system is an extreme ultra-violet photolithographic tool.

41.   (new) A reticle as defined in Claim 35, wherein the projection system is an x-ray imaging system.

42.   (new) A reticle as defined in Claim 35, wherein the projection system is a scapula tool.

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43.   (new) A reticle for use in a photolithographic projection system, the reticle comprising a pattern of alignment attributes with known deviations in the pattern encoded onto the reticle wherein the known deviations are imaged in predetermined locations on an exposed recording media and appear in a predetermined order when the projection system is operated in accordance with an ordered job deck, wherein location of the deviations within the pattern determine if the job deck is in a proper order.

44.   (new) A reticle as defined in Claim 43, wherein the deviations include placement errors in the pattern of alignment attributes.

45.   (new) A reticle as defined in Claim 44, wherein the placement errors include an added portion of an attribute, located at the same position of the pattern of alignment attributes, inside each field point array.

46.   (new) A reticle as defined in Claim 45, wherein the added portion of the pattern is asymmetric with respect to rotation of the pattern.

47.   (new) A reticle as defined in Claim 44, wherein the deviations include addition of two adjacent portions of an attribute that are orthogonal to each other.

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48.   (new) A reticle as defined in Claim 47, wherein the two adjacent portions of the attribute form an L shape.

49.   (new) A reticle as defined in Claim 44, wherein the placement errors include removal of a portion of an attribute, located at the same position of the pattern of alignment attributes, inside each field point array.

50.   (new) A reticle as defined in Claim 49, wherein the removed portion of the pattern is asymmetric with respect to rotation of the pattern.

51.   (new) A reticle as defined in Claim 49, wherein the placement errors include removal of two adjacent portions of an attribute that are orthogonal to each other.

52.   (new) A reticle as defined in Claim 51, wherein the two adjacent portions of the attribute form an L shape.

53.   (new) A reticle as defined in Claim 43, wherein the deviations include x-shift offsets in the pattern.

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54.   (new) A reticle as defied in Claim 43, wherein the deviations include

y-shift offsets in the pattern.

55.   (new) A reticle as defined in Claim 43, wherein line widths of the

attributes are varied as a function of their location in the pattern.